

**United States Department of Homeland Security
National Communications System**

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Before the

**Committee on Homeland Security
Subcommittee on Emergency Preparedness, Science and Technology
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I. Introduction

Thank you, Mr. Chairman and distinguished members of the Committee. I am Dr. Peter M. Fonash and am honored to testify before you today. I am the Deputy Manager of the National Communications System (NCS), which is aligned within the Preparedness Directorate of the Department of Homeland Security (DHS).

In my testimony today, I will explain the role that the NCS played in preparing for and responding to Hurricane Katrina. The NCS' greatest concern was meeting the needs of those affected by Hurricane Katrina and our first priority was trying to facilitate provisioning and restoration of communications services.

As you know, Hurricane Katrina was one of the worst natural disasters in our nation's history, impacting an area of approximately 90,000 square miles. For perspective, the area impacted by Hurricane Charley in 2004 was 1,500 square miles. Also as a result of Charley, more than 150,000 customers were without phone service. In contrast, more than 3 million people in the Gulf States lost phone service due to Hurricane Katrina, and over 180 central office locations were running on generators due to loss of commercial power.

The NCS' authorities and responsibilities regarding emergency communications stem from two principal federal documents. I will give a very brief overview of these, and then detail the NCS' Hurricane Katrina actions for you.

The NCS started under President Kennedy in the 1960s and was formalized in a 1983 Executive Order under President Reagan called E.O. 12472. The NCS is a consortium of federal departments and agencies that have assets, resources, requirements and/or regulatory authority regarding national security and emergency preparedness (NS/EP) communications. Today, the NCS has 23 different federal entities, including the Department of Defense, General Services Administration, FEMA, National

Telecommunications and Information Administration, intelligence agencies, State Department and the Federal Communications Commission, among others. The Office of the Manager NCS, comprised of approximately 100 civilian and military personnel assigned to DHS, executes the programs and activities of the NCS. As set forth in the governing Executive Order, the NCS assists the President, The National Security Council, Office of Science and Technology Policy, Homeland Security Council and the Office of Management and Budget in coordinating the planning and provision of NS/EP communications for the Federal Government under all circumstances, including crisis or emergency, attack, recovery, and reconstitution.

The NCS has a history of addressing issues that cut across the Executive Branch. One important effort has been the establishment and tasking of the Continuity Communications Working Group (CCWG). The CCWG, within the past year, has initiated work on a Continuity Communications Enterprise Architecture. This effort will help to support Minimum Essential Functions of the Federal Government under all circumstances, including crisis, emergency, attack, recovery, and reconstitution.

As mandated by the Executive Order, the NCS also includes an industry component, which was especially valuable during Hurricane Katrina, called the National Coordinating Center for Telecommunications, or NCC, a joint industry/Government body within the NCS. The operational mission of the NCC is the coordination of restoring and reinstituting NS/EP communications in an emergency. The NCC operates a 24 hour, 7-day a week watch center—which during Hurricane Katrina conducted daily analysis and situational monitoring of ongoing events and response capabilities. The NCC houses both industry representatives and Government counterparts in the same physical space to facilitate information sharing and coordination of activities.

The Executive Order also charges the NCS to ensure development of a national communications infrastructure for a range of national security/emergency purposes, including preparing for and responding to hurricanes such as Hurricane Katrina. This includes critical features such as priority communications, and infrastructure redundancy. A key tenant of ensuring communications is reliance on the resiliency and rapid restoration capabilities of the commercial communications infrastructure (e.g., BellSouth, AT&T) necessitating strong relationships with industry.

The NCS works closely with organizations within the Federal government to ensure NS/EP communication requirements are built into technology solutions. For example, the NCS engages with the DHS Science and Technology Directorate, Office for Interoperability and Compatibility (OIC) on the development and creation of standards pertaining to communications. NCS also works with the DoD on the development of security standards for next generation networks.

In addition to the Executive Order, the NCS has a specific communications role in the current National Response Plan, or NRP. Specifically, the NCS is the lead agency with responsibility for Emergency Support Function #2 (known as “ESF 2”), which is the communications component of the National Response Plan. The Communications

annex “ensures the provision of Federal communications support to Federal, State, local, tribal and private-sector response efforts during an Incident of National Significance.”

In support of the ESF 2, the NCS’s NCC functions as a central point of coordination and information sharing for communications infrastructure operators. Once notified of a Federal disaster, the NCC works with its federal government and industry partners to:

- Assess anticipated/actual damage
- Identify communication requirements
- Prioritize requirements
- Monitor the developing situation/response
- Render status reports
- Coordinate communication service provisioning and restoration as required with industry members and other communication providers

To facilitate coordination of industry/Government operations during an emergency, the NCS has established and continuously operates several priority service programs, which help to ensure critical calls are completed in the event of congestion or damage to the national commercial communications infrastructure. The nation heavily used each of these programs during Hurricane Katrina. For example:

The *Government Emergency Communications Service (GETS)* program provides priority treatment for authorized users to ensure a higher rate of call completion during periods of outages or congestion resulting from disasters. Simply put, the phone call of a GETS user such as a state employee or hospital worker could go through before others. During Hurricane Katrina, the NCS issued over 1000 new GETS cards and over 40,000 GETS calls were made in the ensuing recovery period.

The *Wireless Priority Service (WPS)* program established a wireless counterpart of GETS, providing priority treatment for calls made during periods of wireless network congestion by personnel with NS/EP missions, such as those experienced on September 11, 2001. The need for this program was recognized after 9/11 because many Federal, State and local Government and industry leaders utilize wireless as a primary means of mobile communications. During Hurricane Katrina, the NCS enabled over 4,000 cellular phones with WPS capability.

The *Telecommunications Service Priority (TSP)* program establishes a regulatory, administrative and operational framework for restoring and provisioning of priority communications services. Through this program, the FCC authorizes and requires service vendors to give priority to restoration and provision of service to those with TSP assignments. TSP is distinct from GETS and WPS, which provide priority for individual calls over the network in an emergency. During Hurricane Katrina, the NCS completed more than 1500 TSP assignments. Restoration of these services supported key Federal, State, local and commercial activities, such as emergency response at all levels, hospitals, and the military.

The *Shared Resources High Frequency Radio Program* (SHARES) provides a single, interagency emergency message handling system using High Frequency (HF) radio when other communications methods are unavailable. SHARES uses common radio operating and message formatting procedures and more than 250 designated frequencies. Participation in SHARES is open to all Federal departments and agencies and their designated affiliates on a voluntary basis. More than 90 Federal, State, and industry organizations currently contribute resources. The use of SHARES was an overwhelming success within the first few days of the aftermath of Hurricane Katrina. The NCS coordinated participation by 431 SHARES stations. Some of the accomplishments of SHARES include:

- Assisted local Governments and Federal entities with search and rescue missions for over 100 missing people in the affected area by relaying critical information regarding those persons to the appropriate agency.
- Relayed critical logistical and operational information from FEMA and Atlanta's EOC into the Mississippi and Louisiana EOC's.
- Coordinated with National Aeronautics and Space Administration's (NASA's) Disaster Assistance and Rescue Teams, Communications Group, assisting them in their preparations for deployment to Stennis Space Center.
- Provided frequency coordination with Department of Energy, FCC, Military Affiliate Radio System, the U.S. Navy, FEMA, Civil Air Patrol, Amateur Radio Emergency Services (ARES)/Radio Amateur Civil Emergency Service (RACES), Louisiana EOC's and Mississippi EOC's.
- Coordinated inter-communications between SHARES and ARES/RACES emergency networks.
- Established contact with deployed Navy ships USS Truman and USS Bataan which were detailed to New Orleans to assist with the Katrina disaster.
- Relayed health and welfare message traffic between volunteer agencies in Georgia and the National Red Cross Headquarters in Washington, D.C.

The *Alerting and Coordination Network* (ACN) coordinates communications restoration efforts among service providers when the public service network is inoperable or congested. ACN membership includes major communications companies and certain Federal agencies. Operating independently of the public switched network, the ACN supports the NCC-Telecom Information Sharing and Analysis Center (ISAC) 24 hours a day, 7 days a week during both emergency and normal conditions. ACN was not utilized during Katrina.

Now I will detail many NCS's critical actions before and during Hurricane Katrina.

Pre-landfall Preparation:

Hurricane Katrina made its second landfall (Gulf Coast) on August 29, 2005. As of August 28, 2005, the NCS' preparations for Hurricane Katrina included:

- Heightened the alert status of the NCC's 24 hour Watch which provides monitoring and reporting capabilities
- 24 hour Emergency Operations Teams support on stand-by
- National and regional ESF 2 staffing structure for standing up on short notice. GSA and DoD provided personnel to staff ESF-2
- Issued TSP assignments, GETS cards, and WPS procedures
- SHARES activated
- GETS and WPS user support on 24 hour alert
- Activated National Response Coordinating Center ESF 2 desk at the FEMA Headquarters to provide level 1 (24x7) support (effective August 27, 2005, at 7 am Eastern Standard Time (EST))
- Began staffing Region IV, Atlanta, Georgia, Regional Response Coordinating Center
- ESF 2 at Region VI, Denton, Texas, activated on August 28, 2005, at 7 am EST
- NCC Watch providing 24/7 monitoring and reporting capability
- Industry/Government staging of mobile communications
- SHARES contacted local High Frequency organizations in Louisiana, Mississippi, Texas, and Alabama and conducted a teleconference with Nationwide Emergency Communications Service controllers
- Conducted analysis of critical communications assets in the projected impact area

All impacted communications companies moved Emergency Response teams and equipment to the region, established communication bridges among carriers, activated damage assessment teams, and Bell South opened its Operations Center to all carriers for coordination purposes.

Industry and Government participated in joint conference calls, which were conducted daily through the NCC. Communications companies performed assessments from Hurricane Katrina's Florida landfall and continued with preparations for Hurricane Katrina's second landfall. As of August 28, 2005, the NCS/NCC coordinated with communication companies the following preparations:

- Moving company personnel to safety
- Rerouting of traffic loads away from projected impact areas
- Movement of Emergency Response Teams into staging areas
- Identification of over 427 Cell on Wheels (COWs) and Cell on Light Trucks (COLTS) to be deployed into damaged areas to meet initial cellular communication requirements while the infrastructure is being restored
- Identification of communication vans, satellite packages, and pre-deployment of MCI and AT&T mobile communications vans that could be contracted by the Government if needed
- Coordinating with fuel and equipment suppliers
- Deployment and staging of generators
- Identification of 250+ satellite handsets that could be deployed in the event of major cellular system damage
- Coordination for satellite capacity
- Requesting relief from Federal and State reporting and service requirements due to evacuation of personnel from call centers, service centers, and other operations such as remote monitoring and control

III. RESPONSE:

From Monday August 29, 2005 the day of landfall on the Gulf Coast, through the levee breach and the following days, the NCS engaged in many round-the-clock actions. In addition to exercising the priority programs discussed, the NCS' NCC played numerous coordination and facilitation roles. Specifically, the NCS activated SHARES on August 29th and worked to coordinate with United States Northern Command (USNORTHCOM) to identify and deploy communication assets. At this point, communications service providers were awaiting physical access to facilities to evaluate their networks and reporting was sparse during the first 24 hours of the storm.

Katrina caused unprecedented damage to the communications infrastructure. In the telecommunications sector, More than three million phone customers were out of service. For the first time in history, switching centers were out of operation due to water damage. Numerous 9-1-1 call centers were down and up to 2000 cellular towers were out of service shutting down telecommunications networks throughout the area. In addition, significant damage had been inflicted on first responder Land Mobile Radio (LMR) communications.

As of September 2, 2005, all systems were in place for the ESF 2 elements to receive communications requests from the affected region, both through the JFOs and independent requests. In the ensuing period, the ESF-2 elements on location:

- Identified and dispatched satellite vans to various locations affected by the hurricane, including New Orleans City Hall, State Police in Baton Rouge, the Mobile Army Surgical Hospital (MASH) at New Orleans Airport, and to the National Guard in Jefferson Parish
- Dispatched mobile capabilities, such as COLTs, to provide communication to the JFO and offer cellular service to the Louisiana State Emergency Operations Center (EOC)
- Delivered mobile communications trucks to the State EOC and to staging areas for Federal and Industry responders
- Delivered satellite handsets to emergency responders in Louisiana, Mississippi and Alabama
- Initiated contacts with State EOCs to determine communication requirements
- Identified the requirement to replace the destroyed LMR infrastructure in eight parishes in Louisiana. Worked with FEMA to initiate contract to provide replacement system
- Designed and installed new E-911 System in Plaquemines Parish
- Within 48 hours of Hurricane Rita making landfall, arranged for installation of a 106 foot, portable, Emergency Response Tower to Jefferson Parish to replace the destroyed 400 foot permanent tower supporting first responders in Jefferson Parish
- Deployed cellular capabilities were deployed to Cameron Parish to replace communications devastated by Hurricane Rita

At the NCS's NCC in Washington, industry identified three priorities to the NCS: fuel, security and access. Throughout the crisis, industry repeatedly made clear that in order to maintain existing communications, to assess damage to its communications infrastructure and to begin to make repairs and deploy alternative services, it needed to get fuel to locations, to have security to protect personnel, communications infrastructure, staging areas and fuel convoys, and to have access to locations in need of repairs.

The NCC assisted industry by coordinating security forces and requirements between industry and Government to protect repair teams, communications sites, and staging areas. In addition, in a limited number of circumstances, the NCC arranged to provide

communications carriers and broadcast companies with generators where the power was out, fuel for generators, and power outage maps. The NCS recognizes the interdependencies on other infrastructures and has established a relationship with the Energy Information Sharing Analysis Center through the response to previous disasters. Close coordination was achieved through the hurricane response period.

Highlights of the NCS's NCC activities include:

- NCC conducted twice daily conference calls with government and industry representatives. Participants included representatives from communications companies (wireline, wireless, satellite) and from numerous federal entities located in the field and in Washington, including NCS, GSA, FEMA. These calls facilitated information sharing and coordination of response actions.
- Facilitated the provisioning of the United States Marshals Service and Federal Bureau of Investigation (FBI) personnel to protect the most important communications center in New Orleans. These law enforcement officers provided security for employees who felt threatened by individuals outside the facility. The U.S. Marshals and FBI escorted employees and fuel trucks to and from the facility as well as providing facility security.
- Provided the local carrier with detailed satellite images which the carrier had been unable to access until the NCC stepped in to help. This enabled the carrier to prioritize its restoration efforts by providing information on which areas were still totally flooded.
- Successfully Coordinated offers for assistance of communications resources and assets (such as satellite phones) from local, national and international sources
- Facilitated fuel delivery for Broadcasters in the region
- Maintained full time liaison with DoD's U.S. Northern Command for coordinating communication support to effected area.
- Provided commercial emergency mobile assets and coordinated military assets to support local authorities following Hurricane Rita
- Provided status reports to DHS and White House

IV. CONCLUSION:

Next Steps:

The extent of the destruction and damage to communications infrastructure and services caused by Hurricane Katrina greatly exceeded any other disaster previously encountered by the NCS. A hurricane of the historical magnitude of Hurricane Katrina stressed the processes and procedures of the NCS and required ESF 2 to perform functions, such as providing an interim Land Mobile Radio system to 8 parishes, which has never been done before.

Currently, the NCS is fully engaged in assisting with the restoration efforts in the wake of Hurricanes Katrina and Rita, and now Wilma. In an ongoing effort to improve communications, the NCS is currently examining its actions regarding Hurricane Katrina, identifying issues and lessons learned and developing recommendations. We are fully committed to incorporating lessons learned into future plans, procedures, and capabilities.

Some of the areas that will be considered are: standardized and pre-approved emergency credentials to vital communications and other key infrastructure providers, examination of mechanisms for improved facilitation of industry assessment and repair efforts, consideration of increased level of exercises with industry, state and local government and improved acquisition of and coordination for emergency communication capabilities.

The NCS will continue to work with industry and government to improve the perseverance and restorability of the nation's communications network.